

IDNR DAM INSPECTION REPORT FORM (Refer to pages 5 and 6 for instructions.)

Name of Professional Conducting Inspection	Professional License No. (Indiana)
Business Address	Phone: (day) _____ - _____ - _____ (evening) _____ - _____ - _____

Company Name
INSPECTION PREPARATION: Reviewed all pertinent technical documentation related to this dam and site in the State's and the Owner's files: Yes <input type="checkbox"/> No <input type="checkbox"/> Comment _____
MULTIDISCIPLINARY: I am experienced in the technical disciplines or I am working with other professionals experienced in the technical disciplines to properly inspect this dam and appurtenant works. Technical disciplines, in addition to the general civil engineering, may include geotechnical, geological, hydrologic, structural, and mechanical. Yes <input type="checkbox"/> No <input type="checkbox"/> Comment _____

Dam Name			Quad.		Date of Inspection / /		
State Dam ID	Permit (if unapproved see pg. 6)	County	Sec.	T.	R.	Last Inspection / /	
Owners Name					Owner's Phone ()		
Address/Zip Code							
Contact's Name			Contact's Phone (day) _____ - _____ - _____ (evening) _____ - _____ - _____			Spillway Width Top Bot.	Ft. FBD.
Hazard	Drainage Area MI ²	Surface Area AC	Height FT	Crest Length FT	Crest Width FT	Inlet Below Crest FT	Slope: Up Down

FIELD CONDITIONS OBSERVED Water Level - Below Dam Crest _____ Ft. Ground Moisture Condition: Dry _____ Wet _____ Snowcover _____ Other _____	DRAWDOWN STRUCTURE <input type="checkbox"/> Yes <input type="checkbox"/> None Comment _____
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MONITORING <input type="checkbox"/> Yes <input type="checkbox"/> None [<input type="checkbox"/> Gage Rod <input type="checkbox"/> Piezometers <input type="checkbox"/> Seepage Weirs <input type="checkbox"/> Survey Monuments <input type="checkbox"/> Other]
Comments _____

A UPSTREAM SLOPE GOOD ACCEPTABLE DEFICIENT POOR	PROBLEMS NOTED: <input type="checkbox"/> (A-1) None <input type="checkbox"/> (A-2) Riprap - Missing, Sparse, Displaced, Weathered <input type="checkbox"/> (A-3) Wave Erosion-with Scarps <input type="checkbox"/> (A-4) Cracks-with Displacement <input type="checkbox"/> (A-5) Sinkhole <input type="checkbox"/> (A-6) Appears Too Steep <input type="checkbox"/> (A-7) Depressions or Bulges <input type="checkbox"/> (A-8) Slides <input type="checkbox"/> (A-9) Animal Burrows <input type="checkbox"/> (A-10) Trees, Brush, Briars <input type="checkbox"/> (A-11) Other _____
	Comments: _____

B CREST GOOD ACCEPTABLE DEFICIENT POOR	PROBLEMS NOTED: <input type="checkbox"/> (B-1) None <input type="checkbox"/> (B-2) Ruts or Puddles <input type="checkbox"/> (B-3) Erosion <input type="checkbox"/> (B-4) Cracks with Displacement <input type="checkbox"/> (B-5) Sinkholes <input type="checkbox"/> (B-6) Not Wide Enough <input type="checkbox"/> (B-7) Low Area <input type="checkbox"/> (B-8) Misalignment <input type="checkbox"/> (B-9) Inadequate Surface Drainage <input type="checkbox"/> (B-10) Trees, Brush, Briars <input type="checkbox"/> (B-11) Other _____
	Comments: _____

Spillway Width refers to the open channel (typically the emergency or auxiliary spillway) at the control section.

Ft. FBD. refers to the vertical distance from the emergency (auxiliary) spillway control section to the lowest point of the crest of the dam.

Inlet Below Crest refers to the vertical distance from the inlet of the principal spillway to the crest of the dam.

C DOWNSTREAM SLOPE

GOOD	
ACCEPTABLE	
DEFICIENT	
POOR	

PROBLEMS NOTED: ☐ (C-1) None ☐ (C-2) Livestock Damage ☐ (C-3) Erosion or Gullies ☐ (C-4) Cracks with Displacement ☐ (C-5) Sinkholes ☐ (C-6) Appears too Steep ☐ (C-7) Depression or Bulges ☐ (C-8) Slide ☐ (C-9) Soft Areas ☐ (C-10) Trees, Brush, Briars ☐ (C-11) Animal Burrows ☐ (C-12) Other _____

Comments: _____

D SEEPAGE

GOOD (NONE)	
ACCEPTABLE	
DEFICIENT	
POOR	

PROBLEMS NOTED: ☐ (D-1) None ☐ (D-2) Saturated Embankment Area ☐ (D-3) Seepage Exits on Embankment ☐ (D-4) Seepage Exits at Point Source ☐ (D-5) Seepage Area at Toe ☐ (D-6) Flow Adjacent to Outlet ☐ (D-7) Seepage Clear/Muddy **[DRAIN OUTFALLS SEEN** ____No____Yes ☐ (D-8) Flow Clear/Muddy ☐ (D-9) Dry/Obstructed] ☐ (D-10) Other _____ Describe location of drains and indicate amount and quality of discharge.

Comments: _____

E PRINCIPAL SPILLWAY

GOOD	
ACCEPTABLE	
DEFICIENT	
POOR	

DESCRIPTION: _____

PROBLEMS NOTED: ☐ (E-1) None ☐ (E-2) Deterioration ☐ (E-3) Separation ☐ (E-4) Cracking ☐ (E-5) Inlet, Outlet Deficiency ☐ (E-6) Stilling Basin Inadequacies ☐ (E-7) Trash Rack ☐ (E-8) Other _____

Comments: _____

F AUXILIARY SPILLWAY

GOOD	
ACCEPTABLE	
DEFICIENT	
POOR	

DESCRIPTION: _____

PROBLEMS NOTED: ☐ (F-1) None ☐ (F-2) No Auxiliary Spillway Found ☐ (F-3) Erosion-with Backcutting ☐ (F-4) Crack with Displacement ☐ (F-5) Appears to be Structurally Inadequate ☐ (F-6) Appears too Small ☐ (F-7) Inadequate Freeboard ☐ (F-8) Flow Obstructed ☐ (F-9) Concrete Deteriorated/Undermined ☐ (F-10) Other _____

Comments: _____

G MAINTENANCE AND REPAIRS

GOOD	
ACCEPTABLE	
DEFICIENT	
POOR	

PROBLEMS NOTED: ☐ (G-1) None ☐ (G-2) Access Road Needs Maintenance ☐ (G-3) Cattle Damage ☐ (G-4) Spillway Obstruction ☐ (G-5) Brush, Weeds, Tall Grass, on Upstream Slope, Crest, Downstream Slope, Toe ☐ (G-6) Trees on Upstream Slope, Crest, Downstream Slope ☐ (G-7) Rodent Activity on Upstream Slope, Crest, Downstream Slope, Toe ☐ (G-8) Deteriorated Concrete-Facing, Outlet, Spillway ☐ (G-9) Gate and/or Drawdown Need Repair ☐ (G-10) Other _____

Comments: _____

H OVERALL CONDITIONS

Based on this inspection and recent file review, the overall surficial condition is determined to be: ☐ (H-1) Satisfactory ☐ (H-2) fair ☐ (H-3) Conditionally Poor ☐ (H-4) Poor ☐ (H-5) Unsatisfactory

IMPORTANT: IF THIS RATING IS DIFFERENT THAN PREVIOUS IDNR RATING, PLEASE ATTACH EXPLANATION AND REASONS FOR CHANGE ON PAGE 4.

RECOMMENDATIONS AND ITEMS REQUIRING ACTION BY OWNER TO IMPROVE THE SAFETY OF THE DAM

MAINTENANCE-MINOR REPAIR-MONITORING

- ☐ (1) Provide Additional Erosion Protection: _____
- ☐ (2) Mow: _____
- ☐ (3) Clear Trees and/or Brush From: _____
- ☐ (4) Initiate Rodent Control Program and Properly Backfill Existing Holes: _____
- ☐ (5) Repair: _____
- ☐ (6) Provide Surface Drainage For: _____
- ☐ (7) Monitor: _____
- ☐ (8) Other: _____
- ☐ (9) Other: _____

ENGINEERING-EMPLOY AN ENGINEER EXPERIENCED IN DESIGN AND CONSTRUCTION OF DAMS TO:

(Plans & Specifications must be approved by State prior to construction.)

- ☐ (10) Prepare Plans and Specifications for the Rehabilitation of the Dam: _____
- ☐ (11) Prepare As-Built Drawings of: _____
- ☐ (12) Perform a Geotechnical Investigation to Evaluate the Stability of the Dam: _____
- ☐ (13) Perform a Hydrologic Study to Determine Required Spillway Size: _____
- ☐ (14) Prepare Plans and Specifications for an Adequate Spillway: _____
- ☐ (15) Set up a Monitoring Program: _____
- ☐ (16) Refer to Unapproved Status of Dam: _____
- ☐ (17) Develop an Emergency Action Plan: _____
- ☐ (18) Other: _____
- ☐ (19) Other: _____

Recommended schedule for upgrades/comments (Please prioritize and note importance of each item.) _____

Photographs ☐ Attachments ☐

ENGINEER'S INSTRUCTION Instructed owner on the safety concerns with the structure and how to monitor and inspect the dam and appurtenant works in the interim period between the regulatory two-year inspections. Yes ☐ No ☐

Comment _____

Professional Engineer's Signature _____ Date ____/____/____

Reviewed By _____ Date ____ / ____ / ____

Owner/Owner's Representative

INSTRUCTIONS FOR COMPLETING DAM VISUAL INSPECTION REPORT

1. Complete all items that are applicable; if not applicable, write in "N/A". For concrete dams, complete all applicable items and use "comments" section to cover items not included in the check boxes. Also indicate that the dam is concrete in the comments section.
2. Use page 6 to determine ratings of each dam component (items A through G) and for Overall Conditions (Item H).
3. Please write legibly and concisely.
4. Inspector must be knowledgeable with the type of dam, materials, and components being inspected. If not, qualified assistance shall be engaged.
5. The inspector shall review the dam owner's and IDNR project files prior to the inspection. Previous inspection reports shall be closely reviewed for previous problems and deficiencies.
6. If the ratings of the components (items A through G) or the Overall Conditions (item H) of the dam have changed since the last inspection, please complete page 4. If a rating has improved, dam repairs, improvements, analyses, or maintenance must have been performed and documented on page 4.
7. For a dam to have a satisfactory "Overall Conditions" rating, it must have no existing or potential dam safety deficiencies recognized. Safe performance is expected under all anticipated loading conditions, including infrequent hydrologic events (PMP for high hazard dams) and seismic events. The dam owner's project files must contain hydrologic and hydraulic analyses of the dam and its spillways to verify performance. The files must also contain slope stability analyses to verify embankment stability under full reservoir conditions and rapid-draw down conditions. The dam and all of its components must meet current IDNR and design standards. "Normal" deficiencies such as minor erosion, minor seepage, or normal concrete aging may not make a dam unsatisfactory or unacceptable. For a satisfactory "Overall Conditions" rating to be assigned, items A through G generally should all have a "good" rating; however, in some cases an "acceptable" rating may be satisfactory if the "Problems Noted" are minor, or "normal" conditions, such as minor erosion rills, small puddles on crest, or if grass needs mowed, but is in good condition.
8. This inspection report form must be submitted to IDNR along with a formal technical inspection report as described in Chapter 4.0 of Part 3 of the Indiana Dam Safety Inspection Manual.
9. Please sign and date this page in the space below to verify that you have read and understand these instructions.

Inspector's Signature: _____

Date: _____

GUIDELINES FOR DETERMINING CONDITIONS

CONDITIONS OBSERVED - APPLIES TO UPSTREAM SLOPE, CREST, DOWNSTREAM SLOPE, PRINCIPAL SPILLWAY, AUXILIARY SPILLWAY

GOOD	ACCEPTABLE	DEFICIENT	POOR
In general, this part of the structure has a good appearance, and conditions observed in this area do not appear to threaten the safety of the dam.	Although general cross-section is maintained, surfaces may be irregular, eroded, rutted, spalled, or otherwise not in new condition. Conditions in this area do not currently appear to threaten the safety of the dam.	Continued deterioration and/or unusual loading may threaten the safety of the dam.	Conditions observed in this area appear to threaten the safety of the dam. Conditions observed in this area are unacceptable.

CONDITIONS OBSERVED - APPLIES TO SEEPAGE

GOOD (NONE)	ACCEPTABLE	DEFICIENT	POOR
No evidence of uncontrolled seepage. No unexplained increase in flows from designed drains. All seepage is clear. Seepage conditions do not appear to threaten the safety of the dam.	Some seepage exists at areas other than the drain outfalls, or other designed drains. No unexplained increase in flows from designed drains. All seepage is clear. Seepage conditions observed do not currently appear to threaten the safety of the dam.	Excessive seepage exists at areas other than drain outfalls and other designed drains. Seepage needs to be evaluated. Increased flow and/or continued deterioration in seepage conditions may threaten the safety of the dam.	Excessive seepage conditions observed appear to threaten the safety of the dam and is unacceptable. Examples: 1) Designed drain or seepage flows have increased without increase in reservoir level. 2) Drain or seepage flows contain sediment, i.e., muddy water or particles in jar samples. 3) Widespread seepage, concentrated seepage or ponding appears to threaten the safety of the dam.

CONDITIONS OBSERVED - APPLIES TO MAINTENANCE AND REPAIR

GOOD	ACCEPTABLE	DEFICIENT	POOR
Dam appears to receive effective on-going maintenance and repair, and only a few minor items may need to be addressed.	Dam appears to receive maintenance, but some maintenance items need to be addressed. No major repairs are required.	Level of maintenance of the dam needs significant improvement. Major repairs may be required. Continued neglect of maintenance may threaten the safety of the dam.	Dam does not receive adequate maintenance. One or more items needing maintenance or repair has begun to threaten the safety of the dam. Level of maintenance is unacceptable.

OVERALL CONDITIONS

SATISFACTORY - No existing or potential dam safety deficiencies recognized. Safe performance is expected under all anticipated loading conditions, including such events as infrequent hydrologic and/or seismic events. Project Files contain necessary hydrologic, and other engineering calculations to verify dam safety and performance.	seismic events would probably result in a dam safety deficiency.	POOR - A potential dam safety deficiency is clearly recognized for normal loading conditions. Immediate actions to resolve the deficiency are recommended; reservoir restrictions may be necessary until problem resolution.
FAIR - No existing dam safety deficiencies are recognized for normal loading conditions. Infrequent hydrologic and/or	CONDITIONALLY POOR - A potential safety deficiency is recognized for unusual loading conditions which may realistically occur during the expected life of the structure. CONDITIONALLY POOR may also be used when uncertainties exist as to critical analysis parameters which identify a potential dam safety deficiency; further investigations and studies are necessary.	UNSATISFACTORY - A dam safety deficiency exists for normal conditions. Immediate remedial action is required for problem resolution.

HAZARD CLASSIFICATIONS OF DAMS (STRUCTURE)

LOW HAZARD - A structure the failure of which may damage farm buildings, agricultural land, or local roads	SIGNIFICANT HAZARD - A structure the failure of which may damage isolated homes and highways, or cause the temporary interruption of public utility services.	HIGH HAZARD -A structure the failure of which may cause the loss of life and serious damage to homes, industrial and commercial buildings, public utilities, major highways, or railroads.
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UNAPPROVED STATUS OF DAM

A dam that has been given an unapproved status (see entry for permit) means that plans, construction specifications, hydraulic analyses, and/or a geotechnical investigation on your dam, proving the safety of the structure, have not been received and approved by the Indiana Department of Natural Resources (IDNR). IDNR records indicate that no progress has been made to secure this approval. The fact that the dam is inspected under the Regulation of Dams Act (IC 14-27-7.5) in no way alters the illegal status of the structures.

If your dam is indicated to be unapproved, it is requested that your engineer contact the Indiana Department of Natural Resources,